

Hobbies

WEEKLY

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Price Threepence

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Vol. 107 No. 2776

An automatic delivery "Gothic Gateway" CIGARETTE BOX

CIGARETTE boxes or caskets seem a great favourite with many readers, while money boxes and novelty electric lamps seem to run a very close second. So this week we are supplying a full-page of patterns with other details for making the novelty cigarette delivery box shown in Fig. 1.

We term the novelty, "Ye olde Gateway", because the outline of it reminds one so much of a castle keep with its Gothic windows and doors and battlemented walls all round.

Painted Walls

The finishing can be done by hand in one or two easy ways. Grey or biscuit-coloured paint might be used for the general stonework walls with the actual stones, arches and buttresses lined in with a fine pen or brush. Then another method can be adopted, by simply lining the stonework direct on the wood in dark paint and incising or "cutting in" the doors and windows to get the necessary light and shade effect.

We have no fear at all that once the box has been made up and successfully completed the worker will find some means of finishing the surface to make it look attractive.

The mechanical movement to produce a cigarette when required may be well known to many of our readers. In Fig. 1 we give a general view of the box as it would appear on table or sideboard, while in the smaller picture, is shown how the box is raised from the base to allow a cigarette to roll down into the

prepared groove of the centre partition in the box.

When the box is again lowered the cigarette is revealed lying on the roof of the castle ready to be picked up. The whole process is made clear when the details have been studied, and work of construction put in hand. So now to construct the novelty.

Wood $\frac{1}{4}$ in. thick should be used throughout, and the fretsaw does all the cutting. What little chamfering there is can be done with a small plane or wood file.

We commence by making the base, shown at the top of the page of full-size details. Full measurements are given, and the mortise which is central is $\frac{1}{4}$ in. wide. It takes the tenon of the upright partition, detail of which is shown in Fig. 2.

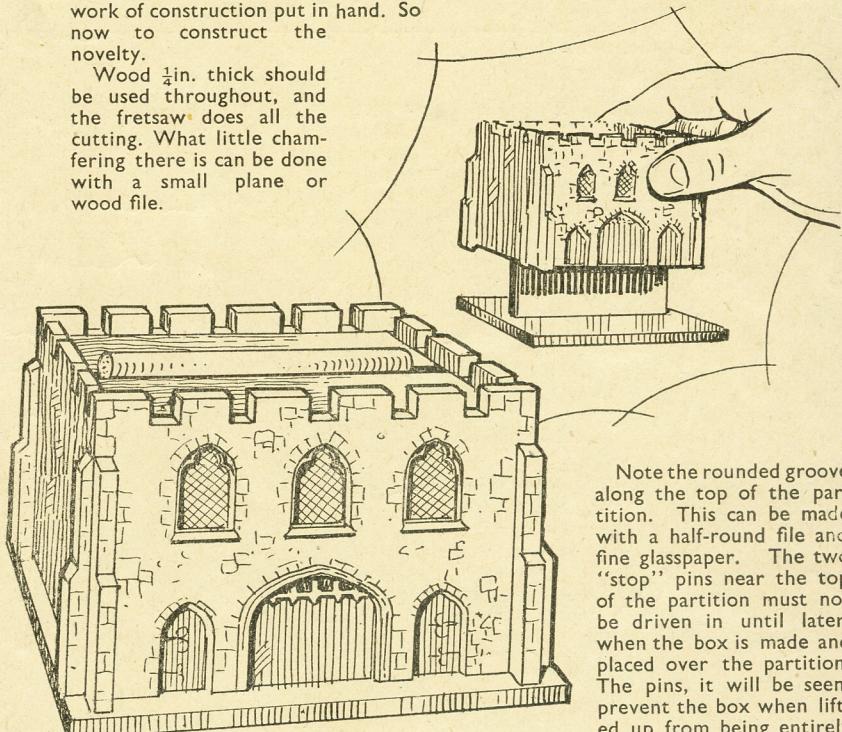


Fig. 1—The completed model, and how it works

Note the rounded groove along the top of the partition. This can be made with a half-round file and fine glasspaper. The two "stop" pins near the top of the partition must not be driven in until later, when the box is made and placed over the partition. The pins, it will be seen, prevent the box when lifted up from being entirely removed from its base.

The two diagrams in Fig. 3 illustrate how the box appears in the two operations in removing a cigarette. At A the box is at rest on its base, and the cigarettes lie in their side compartment on a sloping floor. At B we see the box raised and the cigarettes rolled down so one of them lies in the groove of the partition.

It will be seen from this that when the box is again lowered, one cigarette remains in the groove ready to be picked off, as our larger sketch shows.

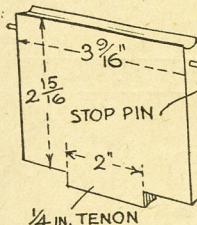


Fig. 2—The central partition

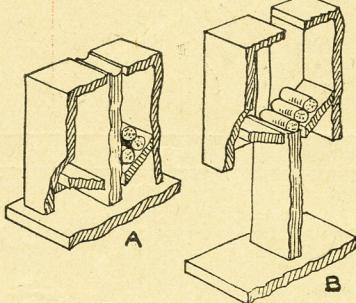


Fig. 3—The delivery action

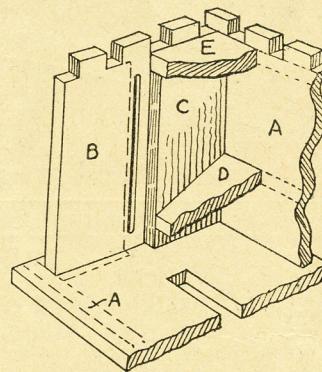


Fig. 4—Interior view of box

To make the box we require two sides as A on the pattern sheet, and two as B. The latter go between the sides A. Then, inside the box, there are two sloping floors D, patterns for which are shown. On the four inner side sections C on the pattern the position of the sloping floors is indicated in dotted lines.

Now, in the sectional diagram Fig. 4, one inner side C and one sloping

smoothly up and down the partition and when in the upward position as B in Fig. 3 it should have no great tendency to fall either to one side or the other. It will be found that there is bound to be a slight movement sideways but this should not impair the correct movements of the box.

The four sides of the box can be all glued up and the floors D chamfered along their edges and glued in. Then

finally the two roof pieces E are let down on to pieces C and glued to them and to the sides and ends of the box.

Ornamental Buttresses

The four buttresses F, as patterns, are finally cut round and glued in the position shown by the dotted lines on the full face of the gate A. The face of the box, and, indeed, all the other parts will need to be carefully cleaned up with glasspaper before the finishing touches are made and the paint applied.

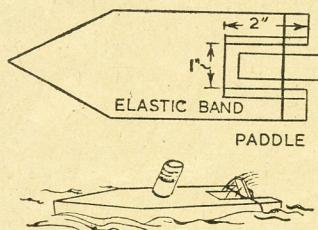
If too many cigarettes are inserted in the box it will be apt to clog the free movement. To put in the cigarettes lift the box into the position B in Fig. 3 and drop the cigarettes in through the slot in the roof.

The whole appearance and attractiveness of the novelty relies a great deal on the care of the finish put upon it. The painted stonework must be carried out with a fine brush or pen, and especial care should be taken with the windows, which should be painted bottle-green, and the representation of the diamond-pattern leaded lights carefully ruled up.

Take your time with this painting to get the very best results you can.

A Paddle Boat

If you have some spare time and plywood you can make this little boat as follows. Cut a piece of wood 6ins. by 3ins. into the flat shape of a



boat. From the back measure down 2ins. and mark 1in. in from the sides. Cut this out and you have two arms left as can be seen. From the spare piece then cut an oblong 1 1/2ins. by 3/4in. Now halfway down the arms cut notches. Fit an elastic band in the notches, slip the paddle between the strands, wind it up and it will go along.

Chisel Handles

If your chisel handles are wearing back through constant hammering with a mallet, just put a boot stud into the end of the handle and it saves them from going any more.

Fireproof Glass

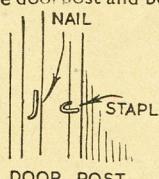
IMMERSE the article in a pan or pot filled with cold water : add a little common salt to the water. Gently keep at this temperature for about 15 minutes, then allow to cool slowly. Glass treated in this way will resist a sudden change of temperature.

Writing on Wood

WHEN writing or printing on wood in ink, this runs and blobs. To prevent this rub the wood with powdered resin.

Small Hinges

SMALL hinges for light doors can be made by knocking 2in. nails into the doornpost and bending upwards, at 90 degrees. Staples are then hammered on to the edge of the door correspondingly. The staples are placed over the nails and the hinges are complete.



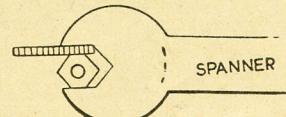
Imitation Sea

TO those who are not very good at painting, here is a hint for making sea around a ship. First of all soak

some old newspaper torn up into small pieces in a large jar for a week. By that time it will have lost all print. The next process is to squeeze all water out of the pulp till it is perfectly dry. Then press it firmly round your model ship and pour hot glue over it. For finishing touches paint with enamel.

A Spanner Hint

PERHAPS when you want to loosen a nut, the spanner is a trifle too big. This can be overcome by placing a coin between the spanner jaws and



the nut as shown in diagram. The coin helps to give a grip so the spanner can be turned easily and satisfactorily. Coins of different thickness can be used as occasion demands.

Model Funnels

IF you want to make funnels for model ships, get a piece of bamboo and saw with a fretsaw to the length required. Then glue to the base, and you have your funnel.

A practical piece of household woodwork is this compact SAUCEPAN STAND

THIS is one of those useful kitchen articles which can be easily made with a minimum of wood. In fact, if substitute plywood, or other suitable composition material is used for the shelves, a piece of deal board 2 ft. 6ins. long and 6ins. wide will be ample. Many readers will, doubtless, have such a piece available.

The rack is most useful; it holds four saucepans in a position easy to lay hold of, and always handy. It is a standard article in the shops, but usually made of iron—ours is of wood, much easier to construct, at least to the tyro in metal work.

Three Legs

Fig. 1 shows the uprights and brackets which support the shelves. Cut the uprights to a length of 2ft. 6ins. making them $\frac{3}{4}$ in. to 1in. wide, according to width of available board. The most suitable thickness would be $\frac{1}{2}$ in. but up to $\frac{3}{4}$ in. can be used, though it does make the rack a trifle heavy in appearance. This is no serious matter, however, for an article intended for kitchen use.

Cut three of the uprights, lay one on the bench, and mark across the distances given, then square across the whole three together. At each spot mark a second line across, just 1in. below those already marked. While the three uprights are still together, clamp them up to prevent them shifting and saw across the lines to a depth of $\frac{1}{4}$ in., no more. Chisel out the wood between the saw cuts to leave notches for the brackets to sit in.

Brackets

The brackets A and B are cut from the same thickness board as the up-rights, nine of A being required and

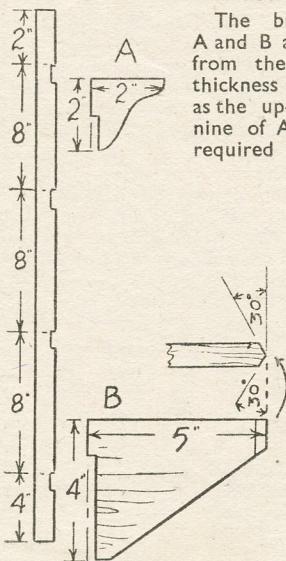


Fig. 1—Leg and bracket piece

three of B. Shape them up neatly, and leave 1in. long projection one side, $\frac{1}{4}$ in. deep, to fit the notches in the uprights. Make all these a neat fit, then fix brackets A in with glue and screws. The bottom brackets B should have their inner ends trimmed off each side at 30 degrees angle, so all three meet together when the shelves are fixed.

Glue and fix them to the uprights with two screws to each as additional strengtheners, as in detail, Fig. 2. The whole can now be smoothed with glasspaper, and the tops of the uprights trimmed to a curve for a neat appearance.

The Shelves

Fig. 3 shows the shelves cut to the diameter given. For the material, $\frac{1}{2}$ in. to $\frac{3}{4}$ in. plywood would be the ideal material, but in its absence (and it is now hard to get anywhere) a good plywood substitute could be employed. In fact any strong board could be used. Quite good shelves could be made from $\frac{1}{2}$ in. match-boarding, if glued together to make the necessary width. Or a builder might let you have odd scraps of wall board, or ceiling composition.

The upright should be spaced round these shelves at equal distances apart. A good plan here is to strike a 9in. circle on a stiff piece of paper, then to divide it into three equal parts. From these parts a radial line is drawn to the centre of the circle.

If this is cut roughly out and laid on the shelves, in turn, small holes can be pricked through on the radial lines as a guide to screwing the shelves in their correct position. Screw the bottom shelf first, and see, as per dotted lines, that the ends of the brackets fit together under the shelf.

Order of Fixing

It will now be best to fix the top shelf, then the remainder. By this method, not only will the uprights be equally spaced, but stand vertical as well. Two screws will be needed to each of the bottom brackets, spaced where shown by circles in Fig. 3, but one to each of the remaining brackets should be enough.

Note that the shelves should be $\frac{1}{2}$ in. away from the uprights, not touching,

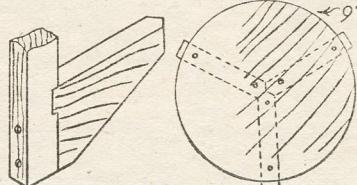
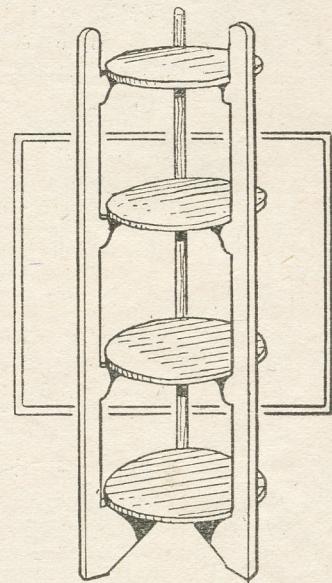


Fig. 2—Joint of bracket

Fig. 3—Details of a shelf



when fixing. Use stout screws, $\frac{1}{2}$ in. to $\frac{3}{4}$ in. long, and countersink the holes so that no screw heads stick up for the saucepans to run against. The edges of all the shelves should be well glasspapered, and will look neater if slightly rounded with a file.

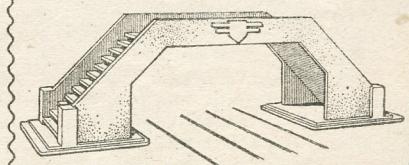
Painted Finish

While many kitchen articles made of wood are left plain, for this saucepan rack a coat or two of paint might well be applied. Such articles easily soil in use and if well painted, or enamelled, can be easily cleaned by wiping over with a damp rag.

See the rack stands firm, with no tendency to wobble. There should be no trouble on this score, but if there is, a little taken off one leg will alter all that, but do not overdo it or the result will be worse instead of better.

Design for a Toy RAILWAY FOOTBRIDGE

Suitable for "O" Gauge models, with 6ins. clearance under bridge. A kit of suitable composition board for all parts obtainable from Hobbies Branches for 5/- or sent post free for 6/- from Hobbies Ltd., Dereham, Norfolk.





Sun Ray Lamp

I WISH to build a sun ray lamp and would appreciate any help you could give me. (G.D.—Shrewsbury).

THE simpler type of sun ray lamp uses an arc struck between two carbons, and this is very easy to make up. Carbons taken from old dry cells are suitable if they are filed to a blunt point. They must be fixed in insulated holders so the distance between the points can be adjusted from zero to about 2ins. by turning knobs (insulated) fitted to screwed rods. A curved metal reflector is fixed behind the carbons. Take great care everything is so insulated that shocks will not be obtained from the adjusting screws.

In use, flex leads from the carbons are taken to the mains, the carbons having been set as far apart as possible. The carbons are now slowly screwed together until an arc is struck. As the carbons burn away, occasionally re-adjustment will be necessary. Dark glasses or other eye protection must be worn.

Canoe Covering

ARE the ex-naval and railway tarpaulins suitable for covering a canoe, or is something thinner needed? (J.R.—Putney).

THE tarpaulin covering for a canoe should be obtained from a firm of boat builders, who will, doubtless, be in a position to supply the right kind of material; the tarpaulins you mention may not be quite suitable. Actually, the best kind of material for the amateur builder to use is canvas.

Cleaning Bedroom Suite

I HAVE a fairly old bedroom suite (walnut) which has turned very dark and dirty looking in colour—my intention is to try to bring it back to its original colour. How should I tackle the job? (J.R.—Rathfarnham).

YOU can do something towards cleaning the suite by a good washing with warm water and soap, with the addition of an egg-cupful of soda to every quart. If the suite is dirty with old polish or varnish, it is quicker work to remove it by the aid of one of the proprietary brands of varnish remover, now on the market.

If not too bad, a patient rubbing with methylated spirit on a pad, will remove a lot of the old varnish and dirt also. After treatment, the wood when dry should be rubbed over with fine glasspaper and then coated with

white hard spirit varnish, laid on in a warm room, or french polished if you can undertake the work.

Do not use the glasspaper unless really necessary as, if the work after cleaning with methylated spirit will pass, a coat of varnish or a rubber of

polish invariably restores the lustre.

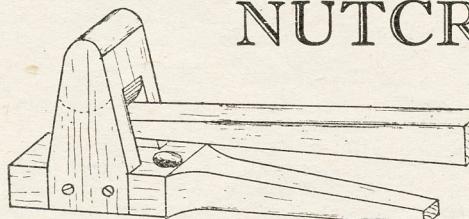
Car Radio

I HAVE been interested in making a small car radio set and wonder what is essential. (W.P.—Gravesend).

THE usual car radio has a vibrator which operates from the car accumulator, converting the voltage to 200 or so, which operates a normal small mains-type receiver. For speaker reproduction, four or more valves are generally required, as only a small aerial is possible.

(An article is appearing shortly in these pages)

The home handyman's own NUTCRACKERS



NUTCRACKERS are always useful at this time of the year, and the ones described here besides being quite easy to make are of novel design and would form a very useful Christmas present.

They can be used on the table by pressing the lever down or they may be held in the hand and operated by nipping like a pair of pliers.

All sizes and kinds of nuts can be cracked with the same ease. For large nuts the handle is put in only a little way, thus giving more leverage. For small ones, that do not want so much pressure, the handle is put in much further.

Use Hardwood

It is necessary to use a good hardwood for making the nutcrackers. Boxwood would be ideal, but it is rather too hard to work. Oak or ash, however, is quite suitable. For the base a piece of 2in. by 1in. is cut 9ins. long to the shape and sizes given in Fig. 1. The handle end tapers off from the full depth of 1in. to $\frac{3}{8}$ in. at the end. The length of this taper is 5in.

The upright which forms the fulcrum of the lever, is made from a piece of 2in. by 2in. and $\frac{3}{4}$ in. in length.

It is necessary to make this upright a good fit into the base, because very considerable pressure is exerted when cracking nuts, especially large ones like Brazil nuts. Therefore, first cut the grooves in the base accurately and make the upright a tight fit into it. Next glue it in and then

put two screws in on each side.

Before fixing this upright in position you must saw and chisel out the centre piece for the handle to go in exactly 1in. wide. Round off the underside, finishing with a file. If you like, this fulcrum may be cut "V" shape instead of rounded, but you will find that the point will soon wear down and also it will mark the handle more than a round one.

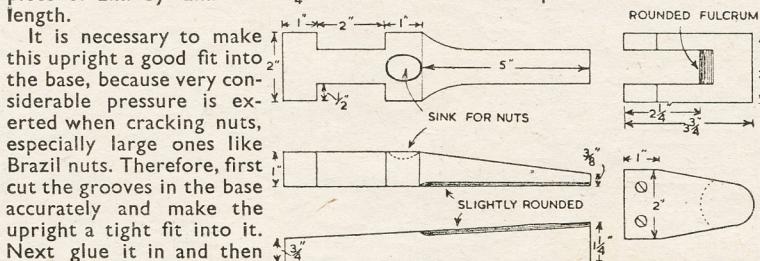
Nut Holder

The sunk part for the nut to go in can be cut with a centre-bit but it would be better if made oval in shape with a gouge—it will then be a better fit for most nuts. As it is only to keep the nut from slipping about, the size is not important.

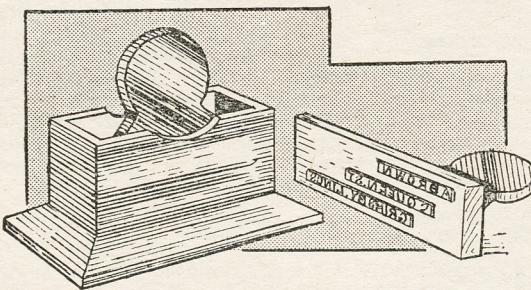
The handle or lever is just a piece of wood nearly 1in. wide so it is a sliding fit in the upright. The other side is tapered from $\frac{3}{4}$ in. at one end to $1\frac{1}{2}$ in. at the other, the length being about 9ins.

The part of the handle and the underside of the base which is held in the hand should have the edges rounded so as not to cut the fingers when gripped.

The nutcrackers may be left in the natural colour of the wood after being glasspapered or may be french polished. They would also be most attractive if enamelled with a Chinese or other lacquer.



A handy thing to make for your own use is A RUBBER STAMP



MOST readers will find a rubber stamp useful, both for letter heading, and competitions. It would also make a somewhat novel present for a friend. As a stamp is of little use without an inked pad, one is included in the style illustrated. The pad has extended sides to form a box to hold the stamp when not in use, making a neat little stand.

The Box Stand

For the stand a few pieces of 3/16in. fretwood will be required, with a piece of thicker wood for the base. This base A, Fig. 1, can be cut from $\frac{3}{8}$ in. to $\frac{1}{2}$ in. wood. The dotted rectangle shows where the stand side pieces, B and C come, outside these the edges are bevelled well down, and two mortise slots, $\frac{1}{8}$ in. deep and $\frac{1}{2}$ in. long are cut where shown into which the end stand pieces B can fit.

It will be best, perhaps, to cut and glue the stand pieces together first before cutting the mortises, then their exact position can be accurately marked by laying the stand on its base and pencilling round the two tenons. Note that a curved piece is cut out from the long side parts. Add a few small fretwork nails to the glued joints and then glue the stand to its base.

Stamp Handle

The handle for the stamp is shown at D in Fig. 2, and the mount at E. Cut both from the 3/16in. fretwood and glue together. Make a close fit of the joint as it must be firm as it is not desirable to have to add any nails to this part. When the glue is quite hard clean off any part of the tenon sticking out beyond the mount, and rub the surface of the mount quite flat and even on glasspaper, laid on a hard flat surface. The mount must be quite level on its surface—if it is not the rubber die glued to it will not make an even impression.

Now for the rubber die. Some

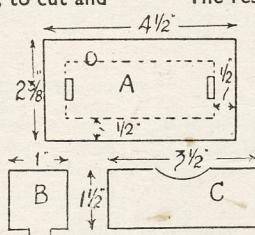


Fig. 1—Details of box

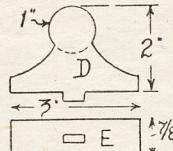


Fig. 2—The stamper

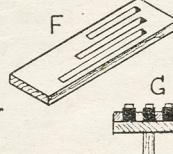


Fig. 3—Type details

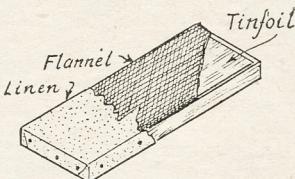


Fig. 4—The inking pad

hand stamp. The two mounts might be more securely fixed together if a

HERE is an interesting note from a reader, W. C. Stevens, of Lothair, Tvl., South Africa.

"Some years ago," he says "while wandering about the veldt we came across an old abandoned mine dump and on it one of your Companion Lathe and Fretsaw Machines—rusted to a solid piece. The fretsaw attachment was broken, the table missing, and the treadle plate broken. However, we salved it, and after a considerable amount of work and some patience we got it working well".

readers may be able to make such a die themselves, but not many, as the work requires appliances and experience. A die can, however, be ordered from most stationer's shops as usually such tradesmen act as agents for rubber stamp makers. Readers, however, who happen to own one of the popular

rubber type printing outfits can make a die in the following simple manner.

Type Space

Cut a second mount piece, E, and in it saw out slots just wide enough to admit the size of type in the printing outfit. No need to saw these too long as spaces will be needed to fill up afterwards. If the reader sets his name and address up in the holder generally supplied with the outfit, the approximate lengths of each line can be ascertained.

These will be of different lengths, as at F in Fig. 3, and should be sawn quite straight. Now fit the types in the slots and fill up any space with the blank rubbers in the outfit. The face of mount E should be covered with a thin coat of glue and mount F pressed on it firmly.

See the types are all level and leave for awhile for the glue to get hard. The result should make a satisfactory

small screw is added to each end. For good results it is imperative not only for the cut out slots to be quite straight, but also to make sure the types are pressed down all level with each other, as in G, Fig. 3.

For a finish the whole, stand and mount, could be stained black, or if something brighter in appearance is desired, both could be treated with a coloured art enamel. The pad is made separately.

The Ink Pad

This can be just a piece of $\frac{1}{8}$ in. felt of the right size to fit in the bottom of the stand so that the stamp rests upon it, ready to use. The pad can be secured with a spot of glue, and should be well soaked with endorsing ink, specially prepared for rubber stamps.

A much superior pad is shown in detail, Fig. 4. It has a base of $\frac{1}{8}$ in. wood, or thereabouts (any wood will suffice) and should be a loose fit in the stand. In fact it should be about $\frac{1}{8}$ in. less in width and length than the interior of the stand. This can best be covered with a piece of tinfoil, though waxed paper would serve. Tinfoil can generally be found as tobacco wrapping, and is more satisfactory.

On this either a piece of $\frac{1}{8}$ in. felt is laid, or two or three thicknesses of flannel, the whole covered with fine linen, or cambric. An old handkerchief will do for the latter if nothing better serves. The linen should be stretched tightly over the flannel, or

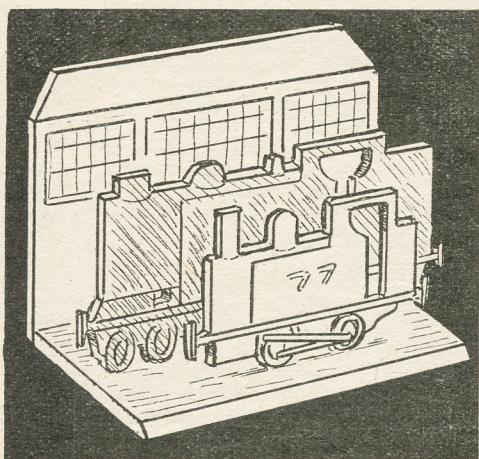
felt, and be fastened down to the edges of the pad with very small tacks, or nails.

Inking

The endorsing ink can be dabbed on the pad until it has absorbed enough to give service for a long time. A more satisfactory method is to soak the top layer of flannel in the ink well before the linen covering is tacked over. The pad can be simply dropped in the stand—it will not shift much if not too loose a fit.

By the way, if readers have difficulty in obtaining rubber dies, the Editor can put them in touch with a source which supply them for 3.6 each.

A novelty, easy to make and paint, is this LOCO LETTER RACK



It is truly amazing what a large number of persons are interested in railways, from the train-spotter to the amateur who understands engines inside-out and from people who just have a liking for model locomotives to those who can build high-precision miniatures.

The railway letter rack shown here therefore will have a wide appeal either as a present or for personal use. Finish can be according to taste, either simple or quite elaborate.

Two Engine Types

As will be seen by the sketch a small railway scene is built up with a "dock" locomotive standing in front, a larger one behind and at the very back of all a signal-box. The letters of course go between the two engines or between the bigger one and the back.

The engines are cut-outs from plywood, also the signal cabin, but $\frac{1}{4}$ in. material is used for the base. Exact dimensions are not given in the

patterns as obviously a rack intended for a large office desk should be bigger than one that is to go on a small table or mantel-shelf at home.

The proportions, however, are indicated by the squares and from these engines of any size can be cut. For general use a 6 in. base would be about correct.

Engine number one is to represent the type of shunting locomotive one so often sees about docks, in private yards and such like places. These engines are quite low-pitched and so it is correct to make this cut-out so that the engine behind is easily seen.

The second engine follows the general lines of those big main system fellows which most of the ex-companies owned.

Express Engine

The boilers on this type are very high with dome and funnel reduced to a minimum. Actually they are as big and powerful as express engines but not having to travel the great distances that these do, tenders are not supplied, all the coal and water being carried in tanks and bunkers fitted on the same frame as the boiler and driving wheels.

Both engines have the tabs (a) left on the lower edge to fit in slots in the base. The signal box which for the moment is merely cut as Fig. 3, fastens right behind the base, being secured by two or three small screws.

Finishing

Locos, base and back cut, now comes the very important question of finishing, which must be done before final assembling.

If a simple rack only is required and the loco outlines sufficient, the whole rack may be stained and polished. But for a more elaborate livery some

lining and painting is necessary. This is really not as hard as it sounds, the engines being mainly made up of side tank. First sketch the line shown in the fuller diagrams on to the cut-outs, grooving along the top of the tank and main frame. This helps placing the colour and also gives a slight embossed appearance.

Painting

Now paint the tanks, boilers, cabs, chimneys and domes either green or maroon, using a high-gloss enamel. Wheels, a line across the tops of the chimneys and the rail at the tops of the bunker are coloured black and the lining on the boilers and letters on the sides are either in gilt or white.

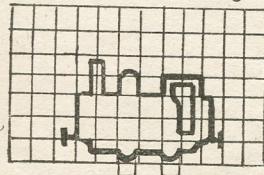
Most engines will shortly of course be carrying the words "BRITISH RAILWAYS" but even so to use the practice of the large number will not be out of place.

A thin black line under the chimney (where it meets the boiler) and in the same position under the dome and whistle helps the general appearance. It is greatly a matter of artistic ability but some workers may note one or two other places where a little outlining will help but broad treatment will give a quite good effect.

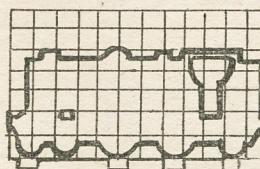
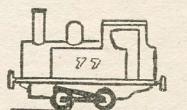
Signal Cabin

The signal cabin at the back is painted in as Fig. 4. The lower half is red with brick courses either scored in or traced with a fine pen. White courses look better than black. The windows at the top are as indicated, being white frames on a darker background, while the roof can be grey or red.

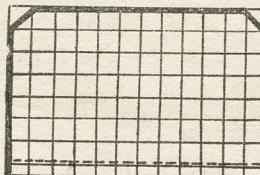
All being finished the parts can now be assembled, the engines being glued into the slots cut for them in the base and the back attached as indicated. The base itself should be stained to a brown tone. Finally a rectangle of baize should be glued on the underside of the base.



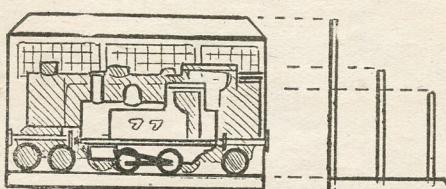
Outline of engine in $\frac{1}{2}$ in. squares



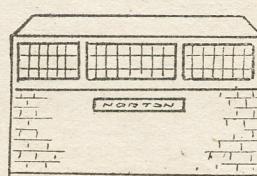
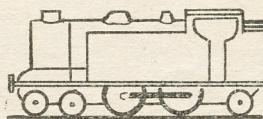
Note fixing tabs on squared outline drawing



How to mark and paint the background cabin



Front and side view of article



The second part of our instructions how the handyman can STAIN AND POLISH

In our earlier article we dealt with the initial work of cleaning the wood and preparing it for the further stages. The matter now to be taken in hand is that, particularly in soft woods, of filling the grain.

Without it, several applications of polish will be needed because the first and second will disappear into the wood. There is no actual need for the woodfiller, because if you apply the polish often enough it will serve to stop the grain in the same way. You can, however, get a quicker result by rubbing in the filler. This actual work should not be taken in hand immediately after staining, but a reasonable amount of time given for it to dry out.

Woodfiller Paste or Powder

The professional has a variety of ingredients with which to fill the grain of his wood, and in the early days pure spirits of wine formed the correct basis. Now, however, artificial woodfillers are obtainable ready for use in paste or powder form. You can get them at the ironmongers generally, and all are simple and similar to use.

A good filler should be non-absorbent and fairly quick in drying. If the paste in the tin you obtain requires thinning, you can do it by the addition of turpentine or benzine. The consistency required for use is that of a normal paint—a little thinner than cream. Apply the filler to the wood and rub it across the grain with a circular movement, pressing into the pores as much as possible.

Hardening

You can tell when sufficient has been worked into the board by finding a slight surface of filler on the wood. This can be wiped off and the work finally rubbed in the direction of the grain. Leave the part again for 10 or 12 hours for the filler to harden, and afterwards go all round to see that there is none in places where it should not be.

For instance, in the angles of moulding or in corners, you may find traces of the filler and this should be taken away with a sharp pointed stick

like a skewer, or similar instrument.

Fillers can usually be obtained in tins in small quantities, but you can, if you wish, mix your own. It will consist of dried crushed whiting put into a tin and mixed to a thin paste with turpentine. You can add to one pint of this mixture a teaspoonful of gold size if you wish, because this acts as a binder and holds the filler in the pores of the wood.

You can further add to the filler by putting in colour dyes to suit any particular class of timber you are using. A little rose pink powder mixed with the dry whiting will, for instance, provide a suitable mahogany colour. If you want the whole thing to be a dark damson, you can obtain this by adding a little vandyke brown. Various aniline dyes are obtainable as



Polish is applied to a wad with flattened bottom surface

soluble in spirits, and they can be dissolved in methylated spirits for use when needed. Normally, however, the ordinary colour dyes obtainable are sufficient to use for staining the work.

Polishing Operation

When the wood has been prepared as mentioned, we come to the stage of the actual polishing. Here again we would suggest a first attempt being made on some waste piece of wood. You cannot expect first-class results at the first attempt, and although you may be disappointed with the result of your operations, you will find that two or three applications will soon give you the "knack" of what to do, with satisfactory results.

For the actual polishing you require

a square of clean linen material and some equally clean wadding to form the rubber or actual polishing bob. The piece of wadding should not be too large, although you must remember it will shrink when the polish is applied to it. Put it over the bottle of polish and let the wadding become saturated, but not too heavily charged.

Charging the Pad

One side of this wadding pad should be flattened, and in this, of course, some of the spirit must be squeezed out. Now lay the pad in the piece of linen, folding the edges over so they form a hand grip and yet provide a flat, smooth surface for the actual rubbing.

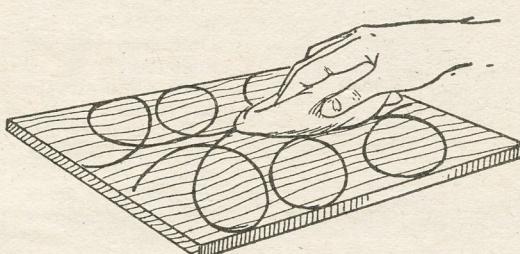
The type of pad most useful is that shown in the illustrations here, and you will see it is just a satisfactory size to be comfortable in the hand. A pear-shape is quite a useful one so that the finger pressure towards one end can control the amount of polish which is squeezed through and transferred to the grain of the wood.

Question of Pressure

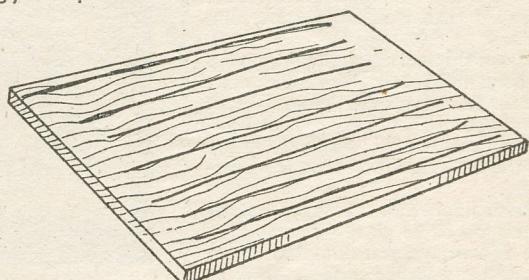
The pressure must not be too heavy. At the first rubbing with the wadding pad fairly saturated, the spirit will come through easily, but as it is rubbed out into the wood, a firmer pressure must be given to get the spirit to do its work. Do not be constantly re-charging the rubber. Use it right out so it is virtually dry before doing so, when, of course, the polish must be applied to the inside wadding and not to the outside linen.

You can have the rubbers in various sizes according to the work in hand, but movement should be covering as much as possible of the wood in one operation. The polishing should be done in a circular movement after the style of a spiral, so that the whole of the surface is covered. You can see this in the illustration herewith.

Do not let the rubber stop on the wood or the pad will be inclined to stick or mark the surface. Sweep it on from one edge, carry through with the circular movement of polishing, and work off at the other end. It is,



The polishing pad is taken over the whole surface in circles



Final light up-and-down strokes are given

as you will see, best to have the polishing in large surfaces if possible. A final light rubbing with a straight up and down stroke can be given.

Further Applications

A nice glazed surface should be the result of this first application, but you will probably find on leaving it for a day or two, that the polish has gone dull. In any case, a second application is necessary after the first has hardened in. Indeed, a third application of polish may be needed, but by that time you should have obtained a highly satisfactory surface.

Each time, of course, less and less actual spirit polish is needed. To prevent your rubber getting hard in the interval of not using it, put it in an airtight tin. Do not on any account use a rubber which has become creased or hardened at all. If you do, the polished surface will become scratched, then you will have to start all over again by scraping off that which you have done.

Transfer Additions

If you are adding transfers to your work—those pretty coloured pictures which are again becoming available to fix on to wood—this must be done before the final polish is added. The transfer is carefully put in position, and the backing paper drawn on according to instructions. Then when the transfer has thoroughly hardened on, a final rubbing of polish over the whole surface can be given.

In polishing fretwork you must, of course, be careful not to rub the spirit into the edges of the fretted pieces so that they become thick and hardened lines. The fret edges can best be polished by the application of polish on an ordinary paint brush, giving two or three coats to brush up the glossy surface. The edge of the wood, however, can never be polished to such an extent as the surface.

For Fretwork

A useful polisher for fretwork of this character can be made by the following method. A long strip of closely woven woollen cloth about $1\frac{1}{2}$ ins. wide should be rolled, much as you would an ordinary bandage. This is held with the edges of the "bandage" on the work and the polishing done with this wad rubber in the usual way. The ends of the cloth will have a better effect on the fretted openings than would the usual solid rubber.

These fretted parts should always be done independently of each other, and for this reason the whole work of construction should have been completed and a trial assembly made before the actual polishing is undertaken.

Remember, too, that if the fretted panels are to be glued on something else as overlays, you cannot fix them to another polished surface. To do it you must scrape away some of the

polish underneath so the wood grain holds the glue. Be careful in gluing, too, that none of it oozes out from adjoining parts. If it does and is allowed to harden, then you will not be able to get any polished effect over that particular part of the surface.

You may also like to get a polished effect of your fretted parts by laying them in a flat tin of polish, much as you suggested for the staining. The polish can cover the part, but the wood should not be left there too long.

Take the part out, drain off as much as possible of the polish, and then hang the piece to dry so that none of the polish coagulates in unsightly blobs. It is better to put the fretted part into the polish two or three times and drain off carefully, rather than leave it in too long so that one gets a hard surface body over the wood.

Methods of Holding

You will have to be careful in holding the work during any polishing operation. It will not do to handle the surface because the greasy finger marks will prevent polish taking well, or will mark on a surface which has already been treated. The work, therefore, should be kept flat on the bench where possible, one or two screws being driven into it just below the height of the wood. These serve as stops to hold the board in place whilst the rubbing is being undertaken.

If you are doing a framework of a box, you can hang it on a projecting piece of wood only to the top of the

bench which will serve as a temporary support. In the case of fretted work or small carvings, you can drive tiny headless nails into the bench so that their points project a little above. Then with the work laid on to them you can do the polishing satisfactorily.

If you want to add moulding or fancy work of that kind, it is best to leave a portion of the wood in place to serve as a handle rather than cut it off the actual length. When the part has been polished you can then saw away the waste piece.

Methods of Holding

Another method of holding is to fix in the back of the work a cup hook or even a small screw which will serve as a temporary handle. Each piece of work may require a little thought as to the best way to operate, before you begin actually to polish.

If you are wanting to apply the polish in parts where it is absolutely impossible to use the rubber, then you can do so by means of brushing it on. For instance, galleon parts are often so small and delicate that brush polishing is the only satisfactory method. Do not, however, attempt to put it on too thickly, but make several applications, allowing each coat to harden in before the next is applied.

In this, as in everything else, much of the success and smoothness of the work depends on the amount of forethought and planning put into it beforehand. Polishing can be undertaken by the amateur providing he follows these instructions and gives a reasonable amount of time and care to the operations.

New Zealand Health Stamps

We are again indebted to Mr. G. Donaldson of Wellington, New Zealand, for being able to illustrate for you the two Health Stamps which have been issued this Christmas Season. They are being sold from 1st October 1948 until 31st January 1949.

As you can see the design shows a boy sunbathing and watching other

children at play. There are two values—1d. postage and $\frac{1}{2}$ d. to the Health Camp fund and 2d. postage and 1d. for the fund. The colours used are a blue centre with a green frame for the lower value and a brown centre and red frame for the 2d.

The Official souvenir cover is most attractive—the cancellation being applied so that the design is perfectly clear in each case and yet the date of issue is quite definite. The illustration is of the cover and the two stamps which were kindly posted to us by Mr. Donaldson and will undoubtedly be of much interest to our readers.

We are also grateful to Mrs. R. D. McLeod of Timaru for sending some of the new stamps a little later.



Practical woodwork for the home is provided in this TABLE MANGLE STAND

A READER writes to us asking for a suggestion and how to make a stand for a small mangle. He writes, "The tub-washer to which the mangle is clamped is being disposed of, and I want to make a suitable stand for the mangle only." There may be others who would anticipate making this change, and we therefore include here the diagrams and instructions as being suitable for such a case.

The stand, of course, must be sturdily built and well screwed or nailed together as there is considerable strain on nearly all members when the actual laundry is being done. Therefore, use good wood of width and thickness to withstand plenty of hard wear.

A good idea of the stand can be got from the sketch, Fig. 1, which shows widely spread legs, well braced at the back and with cross battening below making for strength here and a useful place for standing a bath or pail.

In Fig. 2 we see the general dimensions which should be maintained for such a stand. Wood $\frac{3}{4}$ in. or $\frac{5}{8}$ in. and $\frac{1}{2}$ in. will be found adequate for sound construction.

The Leg Stand

Four legs A should first be prepared from $\frac{3}{4}$ in. or $\frac{5}{8}$ in. stuff measuring 2ft. 10ins. long and $2\frac{1}{2}$ ins. wide. Both ends of each piece should at first be cut square, and then, at what will be the upper ends, will be cut the sloping notched joint shown in detail in Fig. 3.

The best way to make an accurate job of this joint is first to draw it out full size on paper, keeping to the measurements given in Fig. 2. Then, having done this, transfer the outline to the wood and cut it with a small-tooth tenon saw or the fretsaw. Do not cut the lower ends of the legs until these are together and tied in with the cross rails B and C.

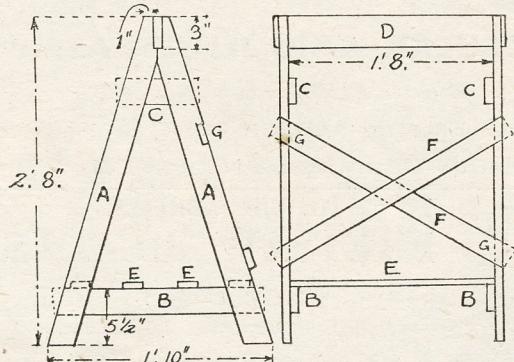


Fig. 2—End and front view with dimensions

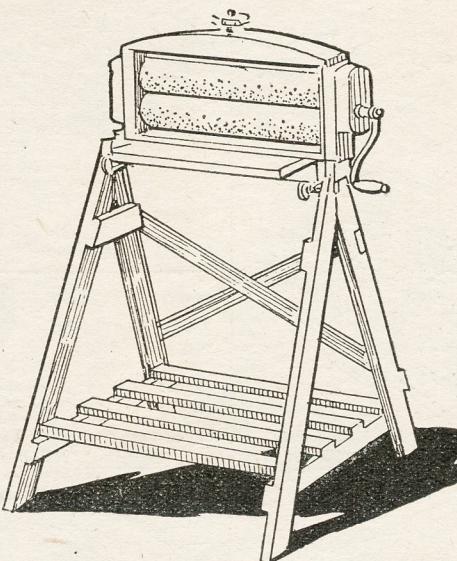


Fig. 1—The completed stand with mangle in position

These two rails measure 1ft. 9ins. long and 8ins. long by $2\frac{1}{2}$ ins. wide and $\frac{1}{2}$ in. thick. These also have square ends until after they have been nailed to legs A. Put each pair of legs together and space them out to the 1ft. 10ins. shown. Then measure up on each $5\frac{1}{2}$ ins., and mark this point on each leg. To these points set a cross rail B, letting the ends of the rails project beyond the edges of the legs as shown by the dotted lines.

Rail C above this will be treated in the same manner, and all four rails will be firmly nailed with two nails at each junction. When this is done cut off the projecting pieces of the rails using the edges of the legs as a guide for the saw.

Next prepare the topmost rail D, which must be 24ins. long by 3ins. wide by $\frac{3}{4}$ in. thick. If the pairs of legs have been carefully marked and cut, this rail should exactly fit down into the space left for it, and two 3in. nails run in from each side should make a very firm fixing. Four cross rails, each 20ins. long by about $2\frac{1}{2}$ ins. wide by $\frac{1}{2}$ in. thick

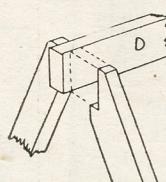


Fig. 3—Rail fitting to legs

are next cut and nailed on to the cross rails B. It would be best to support the underside of rails B, while the upper rails E are being attached.

Tie Pieces

The stand should now be fairly rigid and the finishing ties can be added at this point. Cut two rails as F, 26ins. long, $2\frac{1}{2}$ ins. wide and $\frac{1}{2}$ in. thick. Keep the ends square for the time being and then, finding the centres of each rail, nail them together to form a cross as shown. Now lay this cross on the two pairs of legs as seen in Fig. 2, and make a mark where they come on the edges of the legs.

It will be seen that $\frac{1}{2}$ in. deep recesses will have to be cut in two of the legs as at G to allow the rails to lie flat when they are finally nailed. The projecting triangular shaped pieces at the ends of the rails are cut off neatly with the handsaw or fretsaw, the surface of the legs again forming a guide for the saw during cutting.

Made to Stand Firm

The final operation is in cutting the lower ends of the legs to the correct angle, where they stand on the floor. To do this the simplest way is as shown in Fig. 4. Lay a straight piece of wood on the pair of legs, touching at the two extreme corners as shown. Mark a line on each and cut along with the tenon saw.

It only remains now to clean up the wood surfaces with glasspaper before either painting or creosoting the whole stand. The mangle is held to the cross rail D by two hand cramps usually provided with the machine or easily obtainable.

If you are unable to obtain new wood, you can quite well use second-hand material. Indeed, it would probably be better, because it is more likely to be seasoned and good grained timber. The best finish is a nice clean enamel, put on evenly after a priming coat has been applied and allowed to harden. Paint well into all joints to make waterproof.

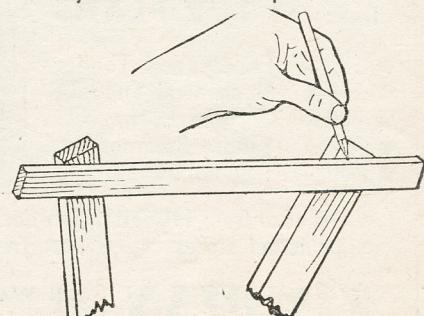
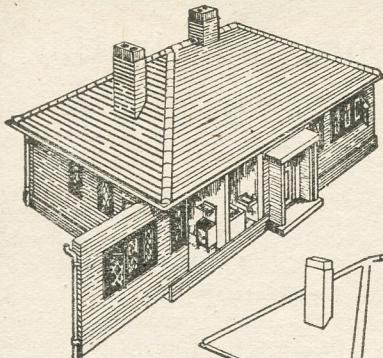


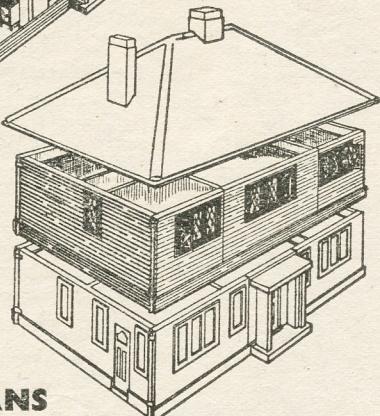
Fig. 4—Cutting the legs square to the floor



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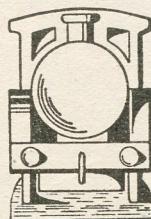
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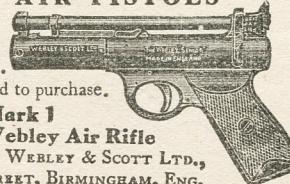
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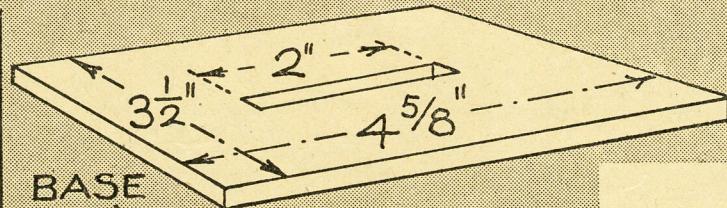
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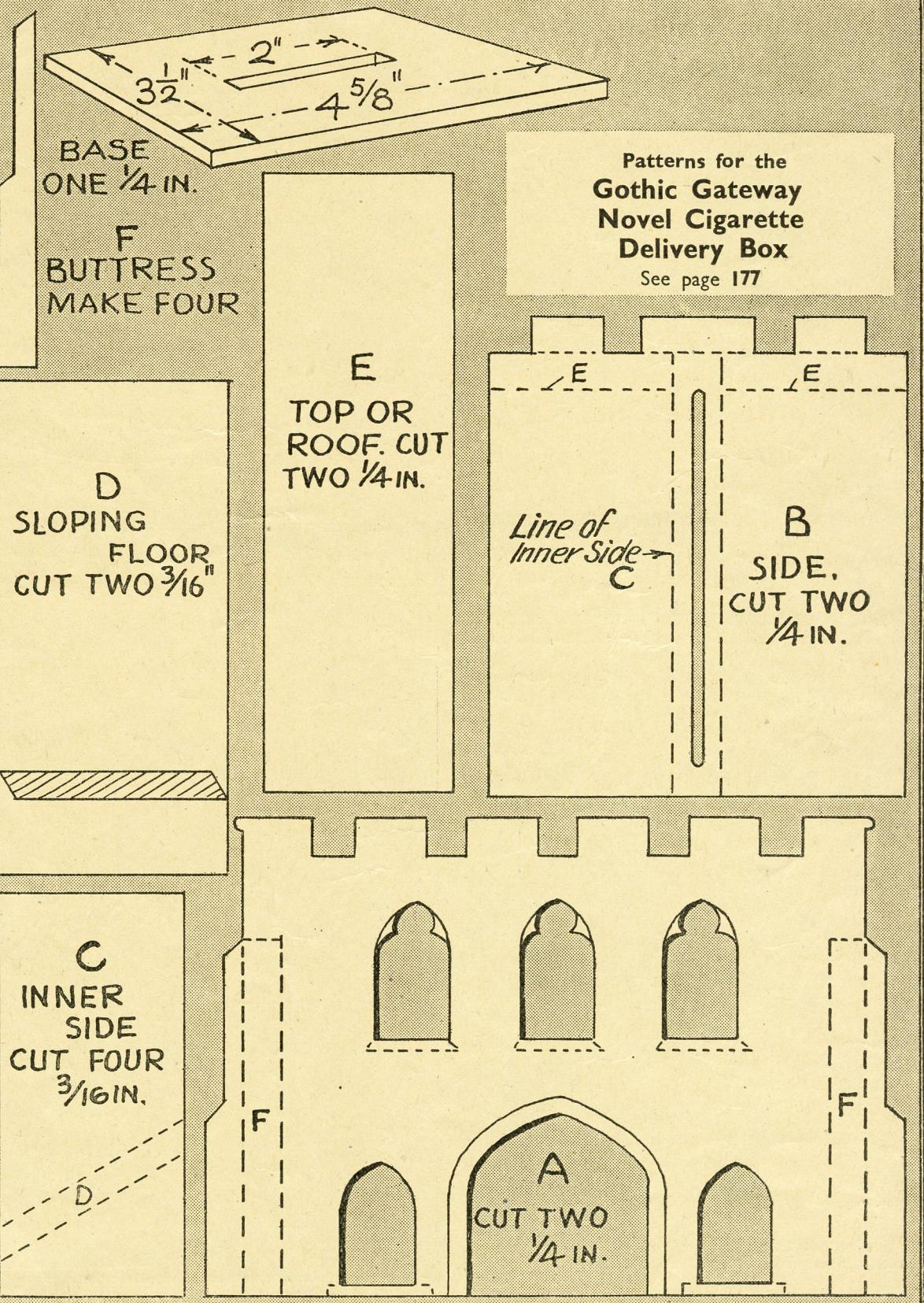
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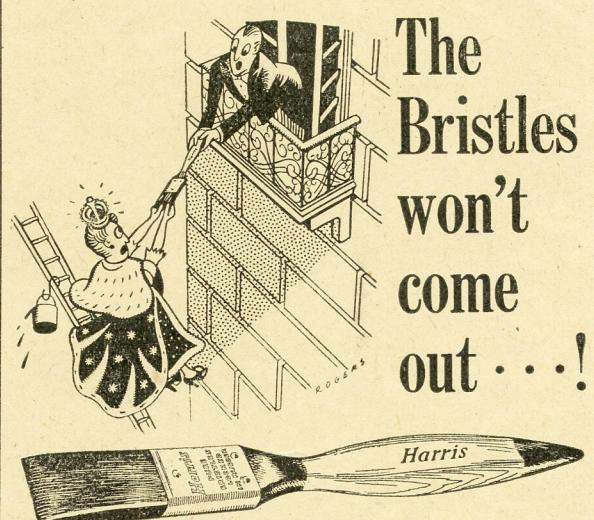
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